

PHENIX WEEKLY PLANNING

3/6/2008

Don Lynch

Run 8 Task Schedule

<u>Item</u>	<u>Start</u>	<u>Finish</u>
RPC support	On Going	On Going
CM Crane design review	On Going	On Going
Next scheduled Maint. Day?	None	None ⁷
Mu Trigger FEE Prototype tests	Done	Done
Complete new beampipe design	Done	Done
End PP run	3/10	3/10
Low energy Run	3/11	3/12
End of Run 8	3/12	3/12
Shutdown '09 starts	3/12	3/12
Install new UPS	3/15	3/31
Install Gas house UPS's	4/15	6/13
End of Run Party	6/30	6/30

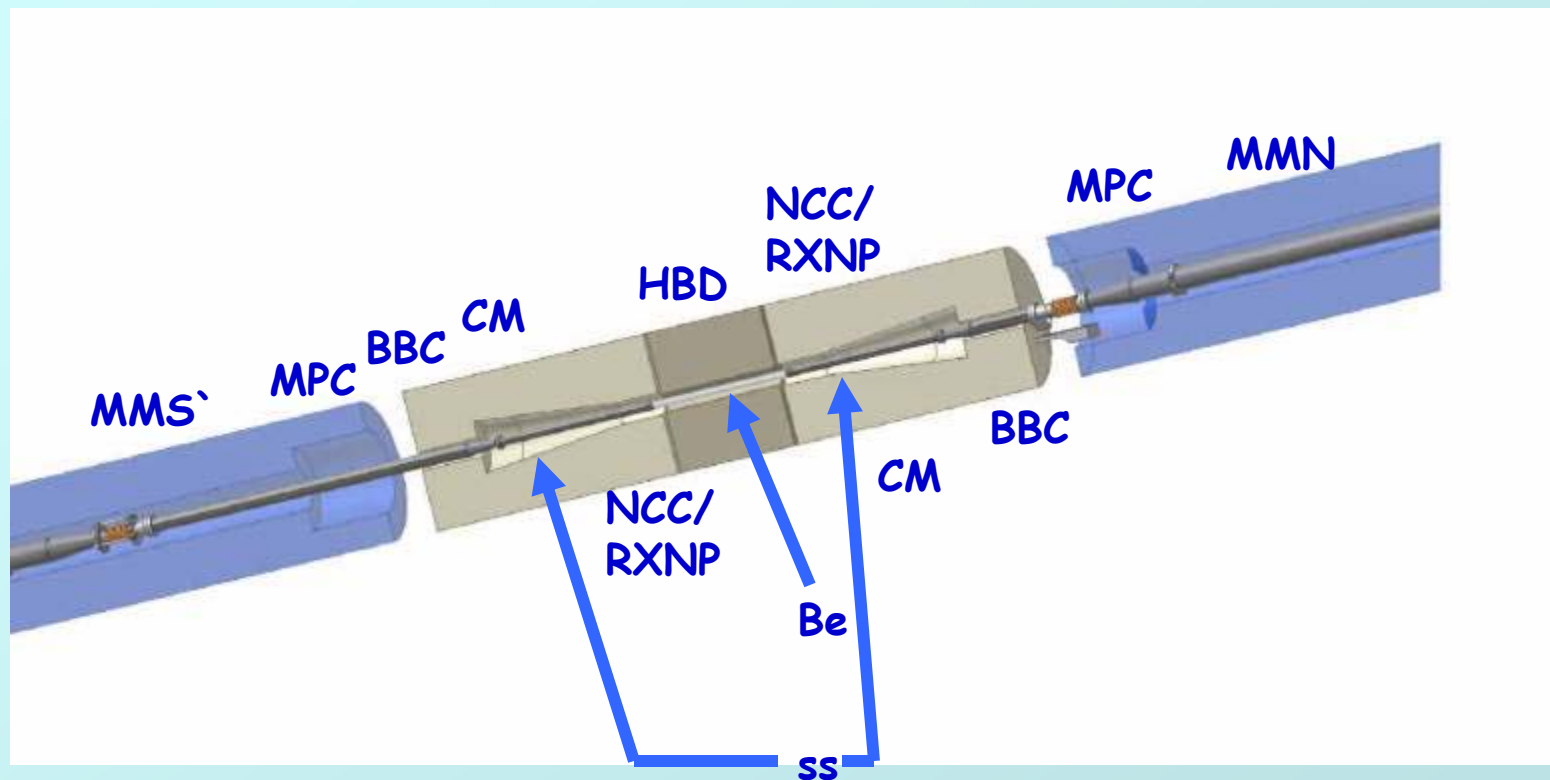
T
e
c
h
n
i
c
a
l
S
u
p
p
o
r
t
+
2
0
0
8

Design Reviews

- CM Crane (analyses complete need meeting with) (Set up review tomorrow)
- MMN Scaffolding (design submitted to C-A for review)
- New Beampipe Review (ready for review, drawings sent to vendor for quote)
- Station 1 Scaffolding (DESIGN IN PROCESS)
- Mu Trigger FEE N & S 3/19 (Need to secure date)
- RPC Prototype 3/25 (Prototype design, installation, gas system, electronics, safety) (Need to secure date)
- MuTrigger N & S rack platform 4/21-5/2 (On deck for design)
- RPC Stations 1, 2 and 3 ~ 6/22-6/20
- VTX/FVTX review ~ 6/1-8/31
- NCC Review ~ 6/1-8/31
- MMS scaffolding (< 2009)

T
e
c
h
n
i
c
a
l
S
u
p
p
o
r
t
+
2
0
0
8

New Beampipe Design & Review



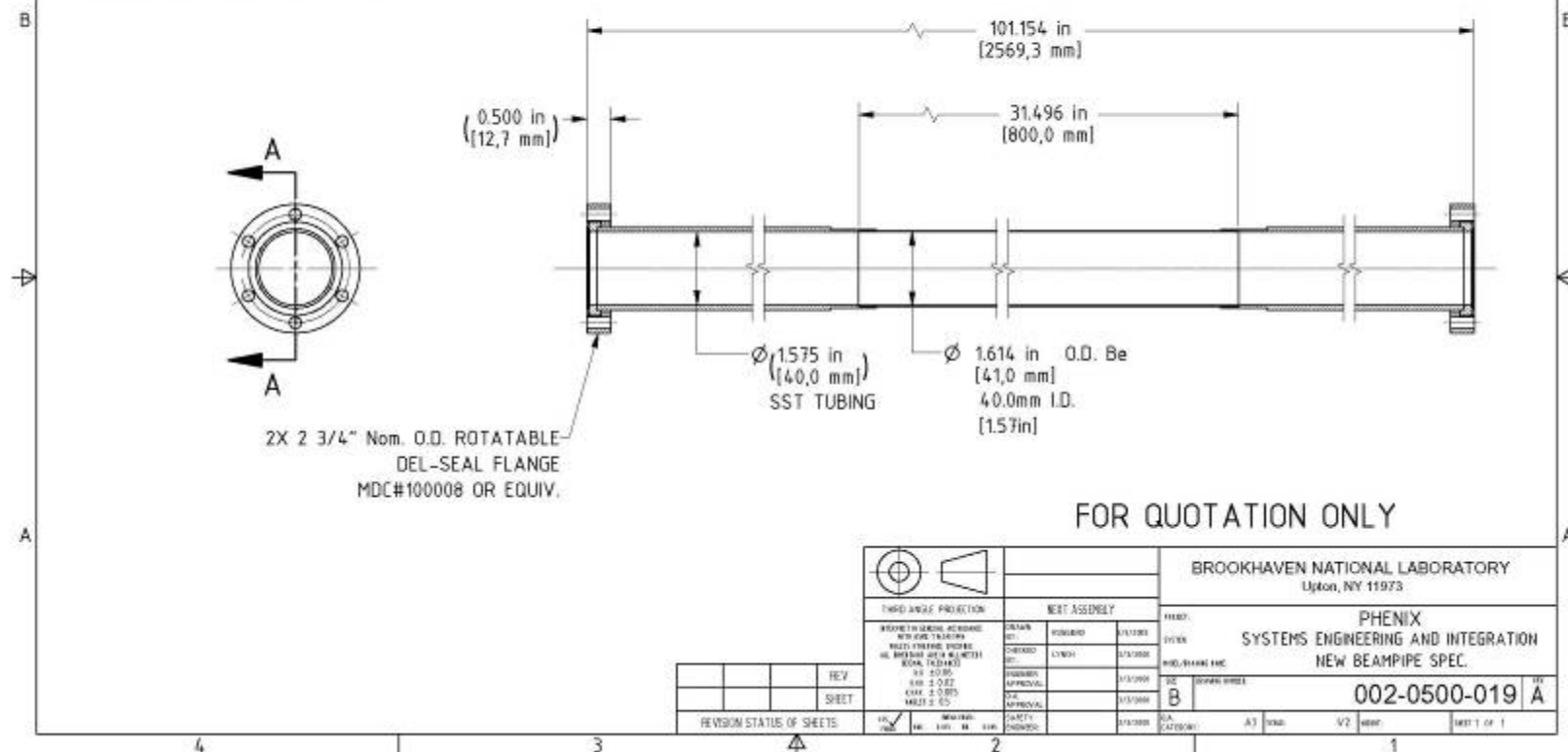
T
E
C
H
N
I
C
A
L
S
U
P
P
O
R
T
+
2
0
0
8

New Beampipe Design & Review

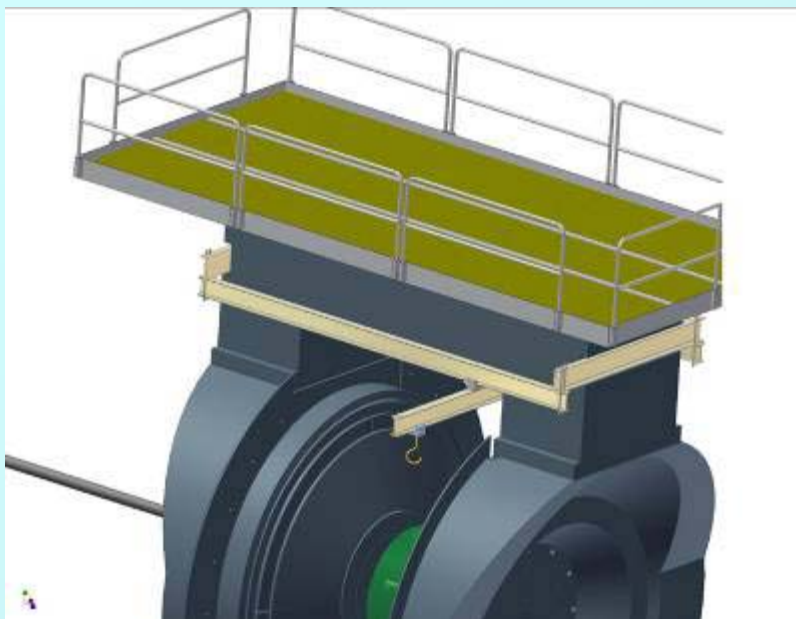
NOTES:

1. MATERIAL: SST & BERYLLIUM PS-200 AS SPECIFIED.
2. BAKEABLE TO 300° C
3. VACUUM TIGHT TO 1×10^{-10} atm-cm³/sec.
4. DETAIL DESIGN AND FABRICATION PROCEDURE TO BE APPROVED BY BNL AFTER CONTRACT AWARD.

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
A			



CM Crane



- Uses Gorbel 1-ton capacity Ceiling mounted Bridge Crane, modified to be supported by 2 Steel Channels attached to CM
- Bridge and hoist to be removed for running.
- Crane Design under review

Received questions and comments from Steve Kane & John Hynan.

Will set up review by end of this week.

PHENIX Relativistic Heavy Ion Collider (RHIC) PHENIX Experiment
BROOKHAVEN NATIONAL LABORATORY
ENGINEERING CALCULATION

No Discontinuation Date: 10/26/2007
Rev: 6
PAGE: 1 of 11

TITLE: Central Magnet Bridge Crane
PREPARED BY: Dan Lynch, P.E.
CHECKED BY: _____

Introduction

The PHENIX IR overhead Crane has been utilized for moving equipment and detectors too heavy or unsafely to be moved by hand in all areas of the IR. The recent addition of the "bridge" platform above the Central Magnet ("CM") limits the overhead cranes utility in the CM region. This analysis note describes the design and analysis for a newly customarily located bridge crane to service the CM region of the PHENIX detector.

The bridge crane itself does not require a structural analysis, as it is a commercial stock bridge crane, 1-ton capacity, GORBEL, Inc. model G1CS. This is a catalog item and will be ordered with a work factor of 1.0.

Analysis described herein are as follows:

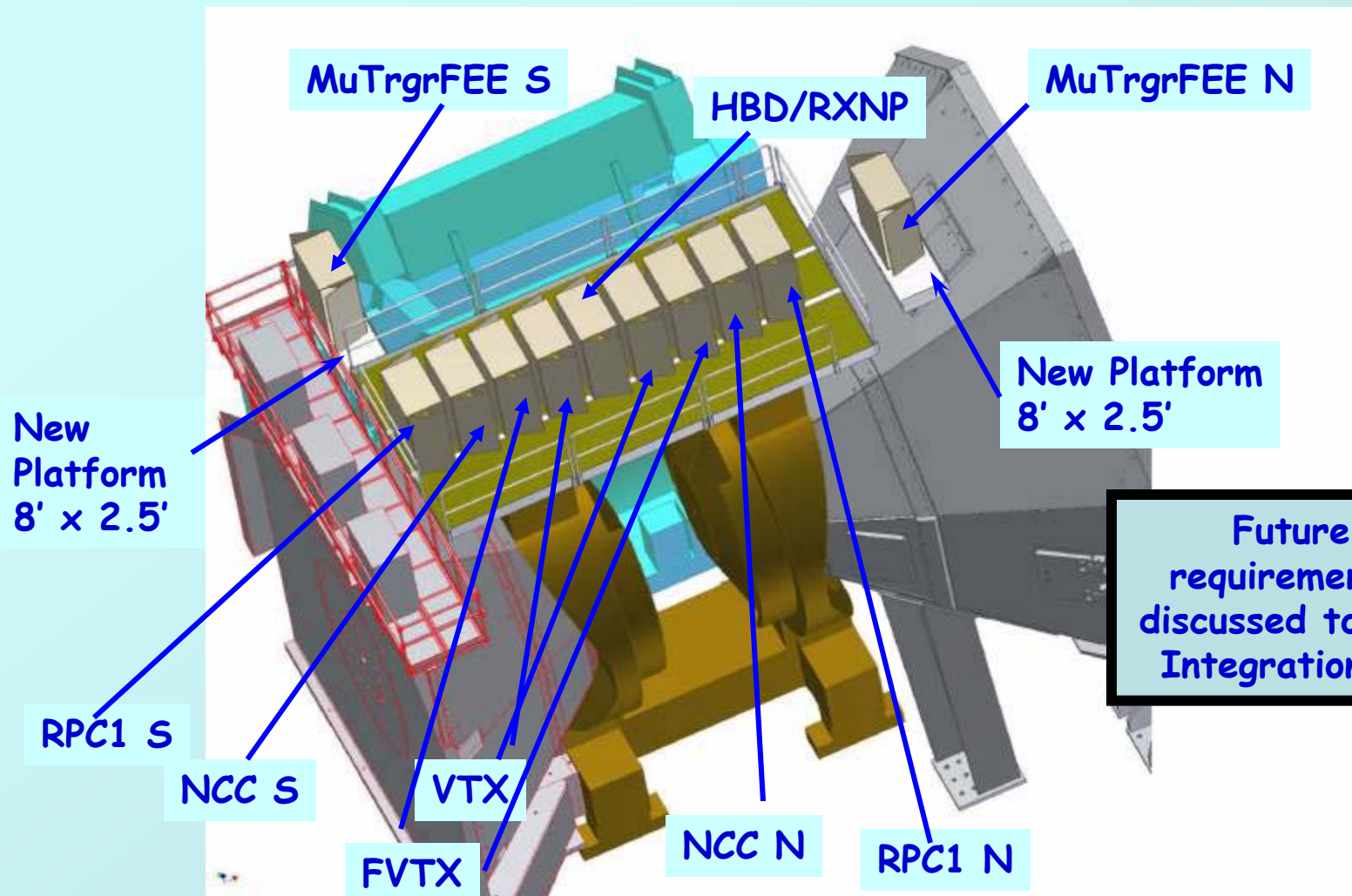
1. Dimensional analysis to demonstrate that the apparatus does not interfere with any existing features of the PHENIX detector and/or IR equipment.
2. Structural analysis of the support channels.
3. Stability analysis of the CM under most extreme crane loading scenarios.
4. Installation analysis to demonstrate compliance of installation methodology with BNL equipment and personnel safety requirements and conformances to "best practice" philosophy.



Current PHENIX plans call for installation of the CM crane in late spring 2008.

Muon Trigger Rack Platforms

T
E
C
H
N
I
C
A
L
S
U
P
P
O
R
T
+
2
0
0
8



Future Rack requirements to be discussed tomorrow at Integration Meeting

3/6/2008

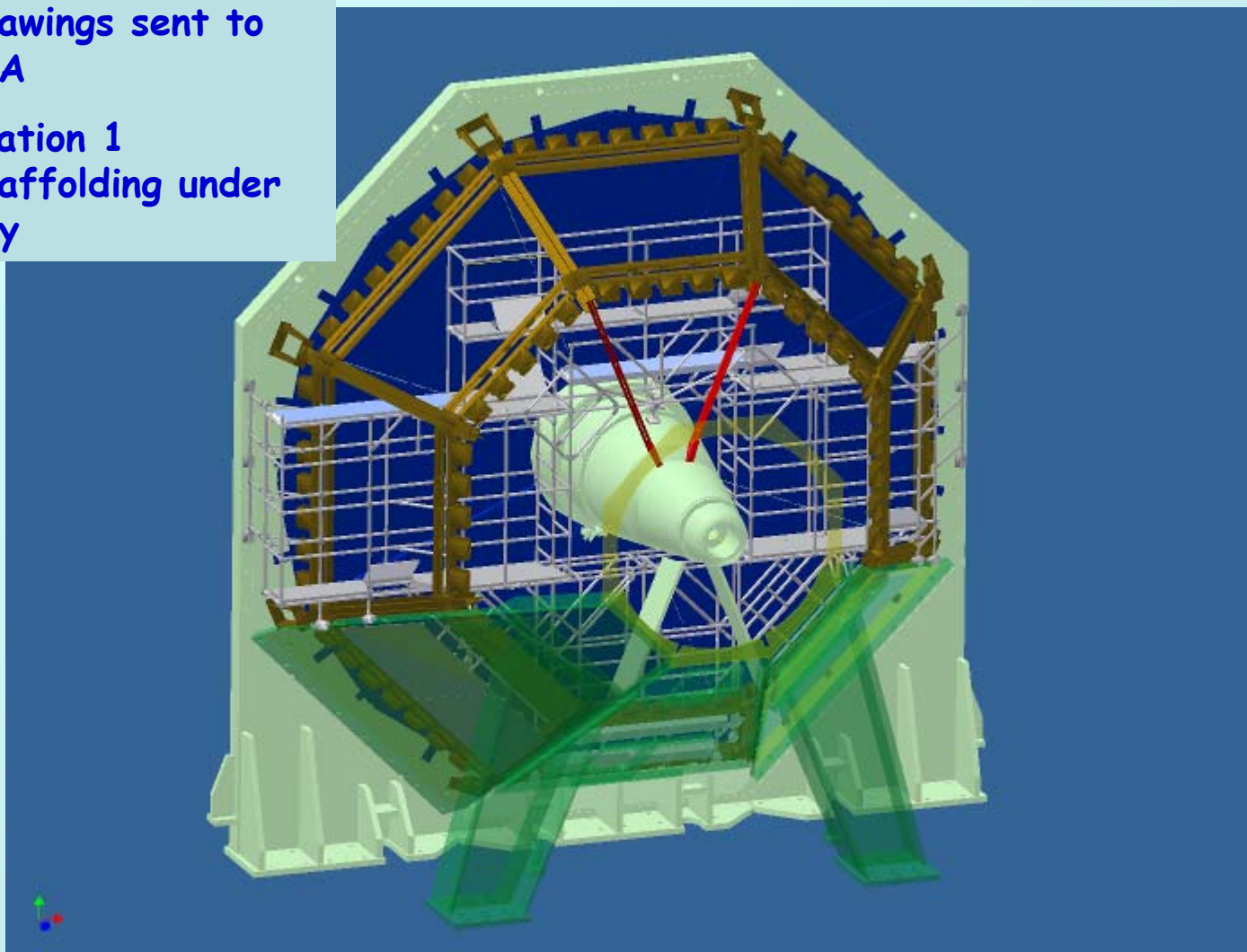
Weekly Planning Meeting

MMN Scaffolds

Design is complete.

Drawings sent to
C-A

Station 1
Scaffolding under
way



MMN Cable Management

Mu Trigger FEE Cable Management:

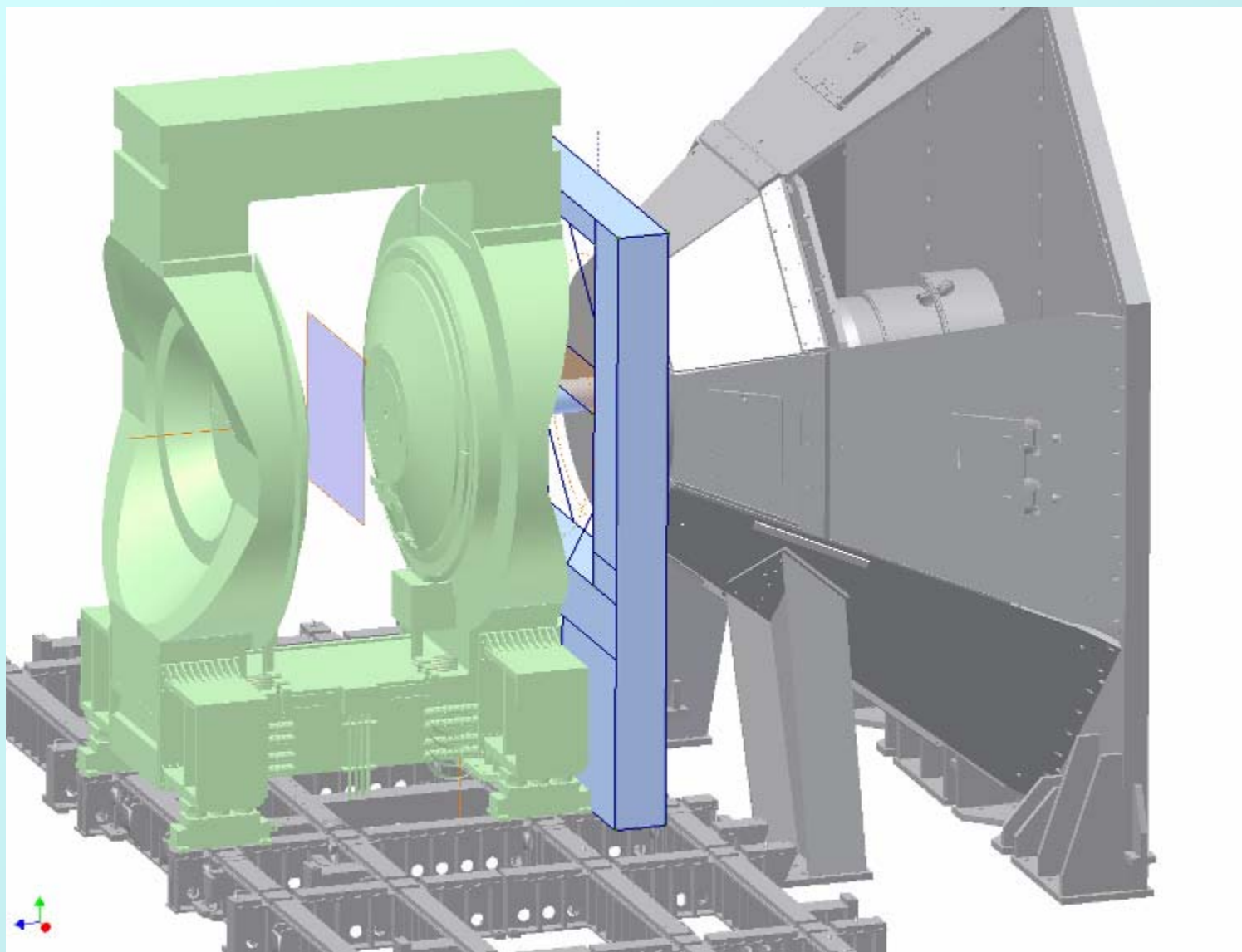
116 12AWG LV cables for North + fibers

100 12AWG LV Cables for South + fibers

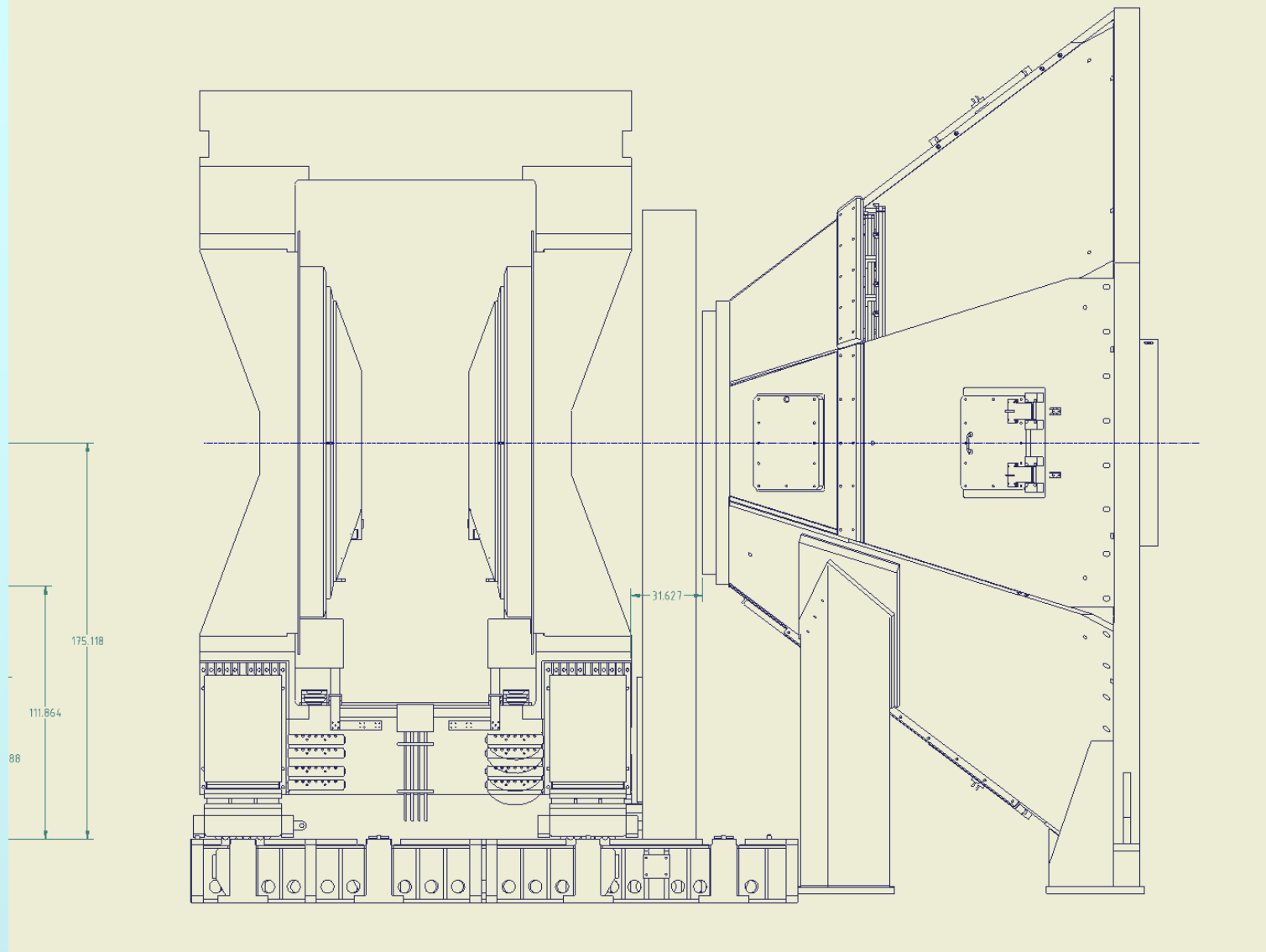
Need power and water to racks

Need to consider RPC2 N installation





TECHNICAL SUPPORT NOON



MuTr North, Station-2, Octant-7



Chassis mount looks good!
We will produce chassis based on this design.

Shutdown '08 Schedule

T
e
c
h
n
i
c
a
l
S
u
p
p
o
r
t
+
2
0
0
8

CM Crane Review	Feb-Mar 15
New Beam Pipe Design	Feb
Complete Run 8	Mar 12
MuTrigger Prototype Tests	Feb 27-March 15
Purge Flammable Gas	Mar 12-14
Remove lock-out & open shield wall	Mar 14
RPC Prototype C tests (in tent)	Feb- Mar
Disassemble & store shield wall & base	Mar 17-21
Beam pipe design review	mid Mar
Mu Trigger Review	Mar 19
RPC Prototype engineering & safety review	Mar 24
IR Crane certification	Mar 14
Remove Collars	Mar 17-18
Disconnect EC & move to AH	Mar 17-April 4
Inventory/test assembly of MMN scaffold	Apr
Install CM access stairs	Apr 7-11
RPC Prototype D tests (in tent)	Apr-May

Shutdown '08 Schedule, cont'd

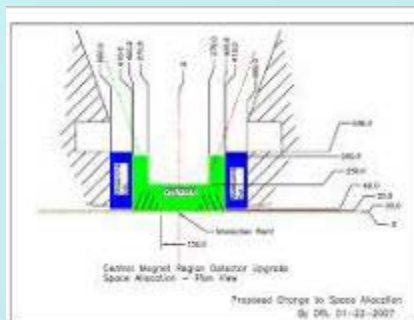
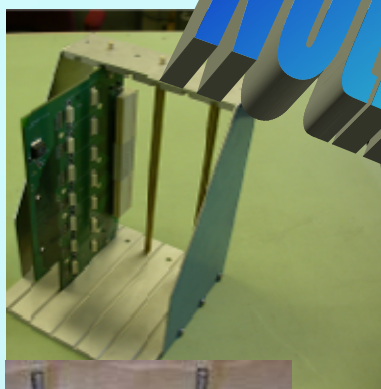
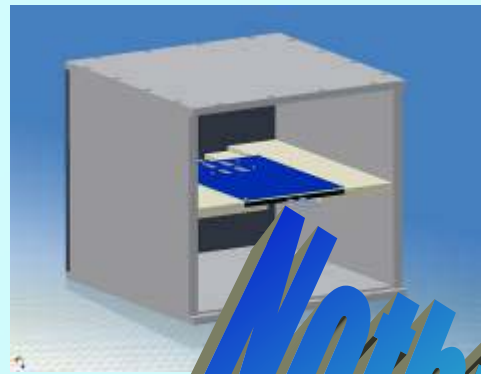
T
e
c
h
n
i
c
a
l
S
u
p
p
o
r
t
+
2
0
0
8

Design RPC installation fixtures & FEE platforms	Apr-May
MuTrgr Platform review	mid Apr
Move MMS South (MuTr Decaps?)	Apr 15 (tax day)
DC/PC west work ?	Apr 1-30
Install CM Crane	May
Remove North access & MMN 4 lampshades	May
Move CM south	May 1
Install Station 1 North scaffolding	May 1
Station 1 North decaps	May
Prep work for Mutrgr platforms (water/elec)	May-June
Prep work for RPC proptotype install	May-June
End of run Party	May 30
Erect MMN scaffolding	June
MMN decaps	June-July
RPC engineering & safety review	mid June
MuTrigger FEE N Install	July
HBD Install	July-August

Shutdown '08 Schedule, cont'd

T
e
c
h
n
i
c
a
l
S
u
p
p
o
r
t
+
2
0
0
8

RPC prototype gas system	July
Move shielding for RPC prototype installation	July
RPC prototype cable routing & support	July
Modify crystal palace & vapor barrier	July
Install MuTrigger FEE N platform	July
RPC prototype install	August
Install RPC prototype rack in tunnel south	August
Install Mutrigger FEE's in MMS for RPC test	August
Install MuTrigger FEE South platform	August
Install MuTrgr N&S rack cooling & electric	August
Install MuTrigger N cooling water & air	August
Replace tunnel shielding	Sept
Connect electronics/gas/water/air for RPC	Sept.
Install MuTrigger N& S racks	Sept.
Remove all installation equipment	Oct.
Prep for run 9	Oct
Close shield wall start shifts	Nov
Start physics	Dec.



Other Work

- VTX, FVTX and NCC prototype support
 - Integration
 - Physical and Rack space
 - Infrastructure upgrades
- New Counting House Door
- VTX Prototype for run 8 ?

Nothing New This Week

Training:

JTA's: everyone up to date (except Carter CPR needs to get credited)

Req'd: pretty good shape. Nothing critical lacking. Rad worker 2 can hold off until later. Maybe we can get the RPC tunnel areas de-posted

Expiring this month: Jimmy& Frank: Haz Com
Me: Phenix awareness

Coming Soon: BNL approves Flex time and telecommuting

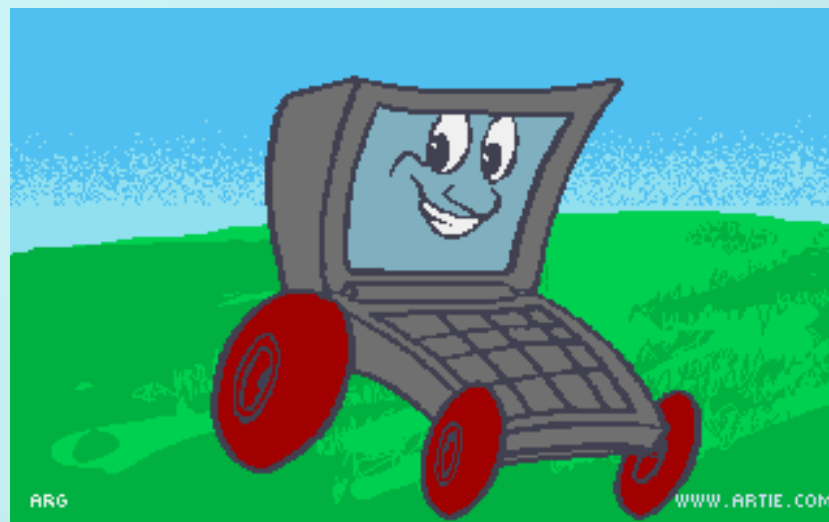
- | | |
|------|---|
| 2008 | Install stations 1 & 2 of MuTr FEE upgrades (north), 1 octant Cu absorber (S), 1 half otants each RPC2/3 S, MMN sta. 2 scaffolding, MuTr Sta 1 N&S scaffolding, 1 octant of MuTrigger FEE upgrades (south, sta 1 & 2), MuTr N stn. 1 & 3 decaps, MuTrigger rack platforms (N&S), CM crane, remove/replace beampipe, infrastructure upgrades & repairs, misc. subsystem work, 1 RPC rack in South tunnel, MuTrgr FEE N & S racks |
| 2009 | Remove HBD & RXNP, scaffolding in MMS, MuTr S stn. 1 & 3 decaps, RPC2 N, RPC3 N, north Cu absorbers, partial VTX, iFVTX, MuTrgr S sta 1 & 2, MuTrgr S rack, 2 racks in N tunnel, infrastructure upgrades & repairs, misc. subsystem work |
| 2010 | Remainder of VTX barrel, partial FVTX, south Cu absorber completed, MuTrgr FEE stn. 3 S, any remaining MuTr decaps, infrastructure upgrades & repairs, misc. subsystem work |
| 2011 | RPC1 N&S, NCC N, remainder of FVTX, DC West upgrade/repair, remove absorbers, infrastructure upgrades & repairs, misc. subsystem work |
| 2012 | NCC S, upgrades contingency & wishlist, infrastructure upgrades & repairs, misc. subsystem work, TBD new and improved upgrades |

** Years refer to the shutdown year and follow the run with the similar number (i.e. work in 2008 is to be done in the shutdown that follows run 8, and so on)*

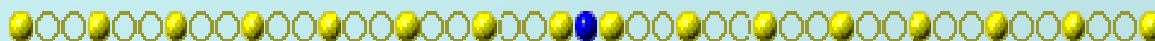
Where To Find PHENIX Technical Info

We've reached the end of run 8

The Shutdown starts next week
and we have lot's of work to do.



Links for the weekly planning meeting slides, long term planning, pictures, videos
and other technical info can be found on the web site:



http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm